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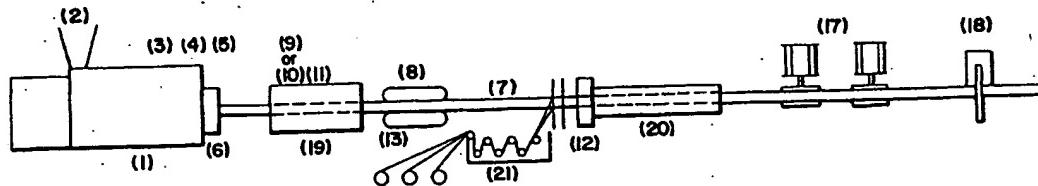
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(54) Fiber reinforced thermoplastic structural member

(57) In the manufacture of a structural member comprising a thermoplastic composite core with an exterior reinforcing layer, the core member is initially extruded in the shape of a profile (7). The profile is then contacted with reinforcing fiber (13) and resin to form the exterior reinforcing layer. The exterior thermosetting layer is cured to form a reinforcing layer. The structural member is preferably manufactured using a pultrusion method in which a tractor device (8) is used to provide linear movement of the profile from the extrusion head to the exterior

coating operation. The fiber-reinforced thermoset is coated on the entirety of the exterior of the profile or is applied only on a portion of the profile requiring reinforcement in a defined load-bearing direction. The preferred thermoplastic core comprises a polymer-fiber composite material. Such a structural member has significantly improved Young's modulus providing strength for applications such as telephone poles, electric poles, electric lighting poles, boat mast or keel applications, lumber replacements, structural members used in window and door manufacture, etc.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 4099

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
X	WO 91 00466 A (JONACO GMBH) 10 January 1991	12-26	B29C70/54						
A	* page 3, line 20 - line 29 * * page 4, line 20 - line 26 *	1-11							
A	---								
A	US 4 851 458 A (HOPPERDIETZEL SIEGFRIED) 25 July 1989 * example 1 *	1							
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A	EP 0 558 020 A (THEYSOHN FRIEDRICH FA) 1 September 1993 * column 4, line 30 - line 49; figure 1 *	12,15							
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A	GB 2 202 784 A (WIIK & HOEGLUND) 5 October 1988 * page 4, line 15 - line 19 * * page 9, line 8 - line 14 *	1-26							

			TECHNICAL FIELDS SEARCHED (Int.Cl.6)						
			B29C B27N						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of compilation of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>20 May 1997</td> <td>Attalla, G</td> </tr> </table>				Place of search	Date of compilation of the search	Examiner	THE HAGUE	20 May 1997	Attalla, G
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THE HAGUE	20 May 1997	Attalla, G							
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document							
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